Drought Information Statement

WFO Amarillo, TX

Issued: January 25, 2006

Synopsis

At the end of 2005, Texas experienced one of the driest October through December periods on record. January began much the same way, with dry and warm weather common. However, the large scale weather pattern has undergone a slight change during the past week or so, transitioning to a pattern slightly more favorable for a chance of rainfall across the Texas Panhandle. Temperatures have remained mild though, as we are experiencing the 7th warmest January on record.

Drought Monitor

The January 17th release of the U.S. Drought Monitor depicts that much of the Texas Panhandle is still in a moderate (D1) drought. The northeast Texas Panhandle is under abnormally dry conditions. The Texas Panhandle is having both agricultural and hydrological impacts due to the drought. The U.S. Drought Monitor can be viewed online at http://www.drought.unl.edu/dm. It is a collaborative effort between several government and academic partners. The U.S. Drought Monitor is issued each Thursday morning and takes into account hydrometeorological data through 6 AM Tuesday. There are four levels of drought, ranging from D1 (moderate) to D4 (exceptional drought).

Climate Data and Analysis

January 2006 has been dry across the Texas Panhandle. Most areas have received little or no precipitation so far this month. Rick Husband International Airport in Amarillo has received only 0.03 inches of precipitation so far this month which is only 6% of normal. Amarillo has gone 151 days with only 0.81 inches of precipitation. Normal precipitation for that time period is 5.43 inches. The record dry spell in Amarillo is 202 days with only 1.22 inches of precipitation.

Impacts

So far, exceedingly dry conditions have kept the fire danger constant across the Texas Panhandle, where all counties remain under burn bans. According to the Texas Forestry Commission, a high fire danger still exists for the entire Texas Panhandle. The recent weather pattern has helped to maintain this fire danger in more ways than just a lack of rainfall. Low pressure systems have brought abnormally dry air to the Texas Panhandle. Combined with above average temperatures, relative humidities have routinely fallen below 15 percent, a critical value for fires. Windy conditions have typically accompanied the dry air, further compounding the problem. Data from the U.S. Geological Survey indicate that rivers remain at normal winter levels. The ongoing lack of precipitation has had an effect on Lake Meredith, a major source of drinking water for West Texas cities. Lake Meredith is down 6.78 feet from 67.68 feet on June 18th of 2005 to 60.90 feet. The record low lake level is 58.43 feet. There are no communties with watering restrictions in the Texas Panhandle. Soil moisture levels remain depleted across the Texas Panhandle. According to the NOAA Climate Prediction Center, soil moisture levels are still in the 15th percentile or lower. Significant rain will be needed to bring levels back towards the 50th percentile, which would be considered average.

Forecast

The weather pattern has been changing slightly across the country; slowly modifying into one that will bring a few storm systems into the region with more regularity, but these systems will still not have access to moisture from the Gulf of Mexico. However, weak La Niña conditions have developed over the past few months. La Niña occurs when abnormally cool surface waters form off the equatorial west coast of South America, and extend well out into the Pacific Ocean. It is closely related to El Niño, and can impact the weather across the globe. What does a La Niña mean for the weather in Texas? At this time, it is too early to tell what this specific La Niña event will mean for the weather in Texas. This is due to the fact that the strength and duration of the La Niña is not fully known. Using historical data, it can be determined what effects La Niña has had on the region's weather from a climatological stand point. For the time period from

February through April, La Niña has historically had a mixed effect on the precipitation in the Texas Panhandle, though slight tendencies towards below average precipitation have been observed. Temperatures from February through April has historically been shown to be above average in the Texas Panhandle during La Niña conditions. No drought relief is expected during the next two weeks, and into the spring, in the Texas Panhandle. The drought is not expected to end any time soon. The current drought has taken nearly five months to manifest itself. Likewise, it could take several months to end. The latest 14 day outlook from the NOAA Climate Prediction Center shows below normal precipitation is expected with near normal temperatures. The latest Drought Outlook, issued by the NOAA Climate Prediction Center, indicates that no drought improvement is likely through at least April. This should not be interpreted as meaning the drought will end after April.

As has been mentioned, the current drought has been developing since the end of summer of 2005. It will not end overnight with one “good” rain. The amount of rain that would need to fall over the next three months to completely end the drought would be in excess of 5 inches. Climatologically, the chance of that happening is less than 5 percent.

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Next Update: February 9, 2006

Figure 4 – County Burn Bans (Source: AFC)